

A NEW *SCHIEDEELLA* (ORCHIDACEAE: SPIRANTHINAE)
FROM GUATEMALA¹

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ABSTRACT

Schiedeella schlechteriana Szlachetko & Sheviak is described as new. It is distinguished by a lip with narrowly rhombic hypochile and abruptly expanded epichile, dendritically proliferated nerves, and apically-directed auricles. It is compared with related species, one of which, *S. valerioi* (Ames & Schweinf.) Szlachetko & Sheviak, is formally transferred from *Spiranthes*.

Key Words: *Schiedeella*, new species, new combination, Guatemala

Schiedeella is a genus of Central American Spiranthinae characterized by nearly erect gynostemium; awl- or needle-like rostellum, with the rostellum remnant narrowly triangular and usually distinctly 3-dentate with the central tooth longest; nearly sheath-like viscidium; extremely reduced column foot; cuniculiform spur; basally nearly erect or only slightly arcuate lip; flat claw with unthickened margins; and herbaceous floral and cauline bracts. During a monographic study of the genus by the first author, three specimens constituting a single collection were found which are not referable to any recognized species and are here described as distinct:

Schiedeella schlechteriana* Szlachetko & Sheviak, *sp. nov.

(Figure 1)

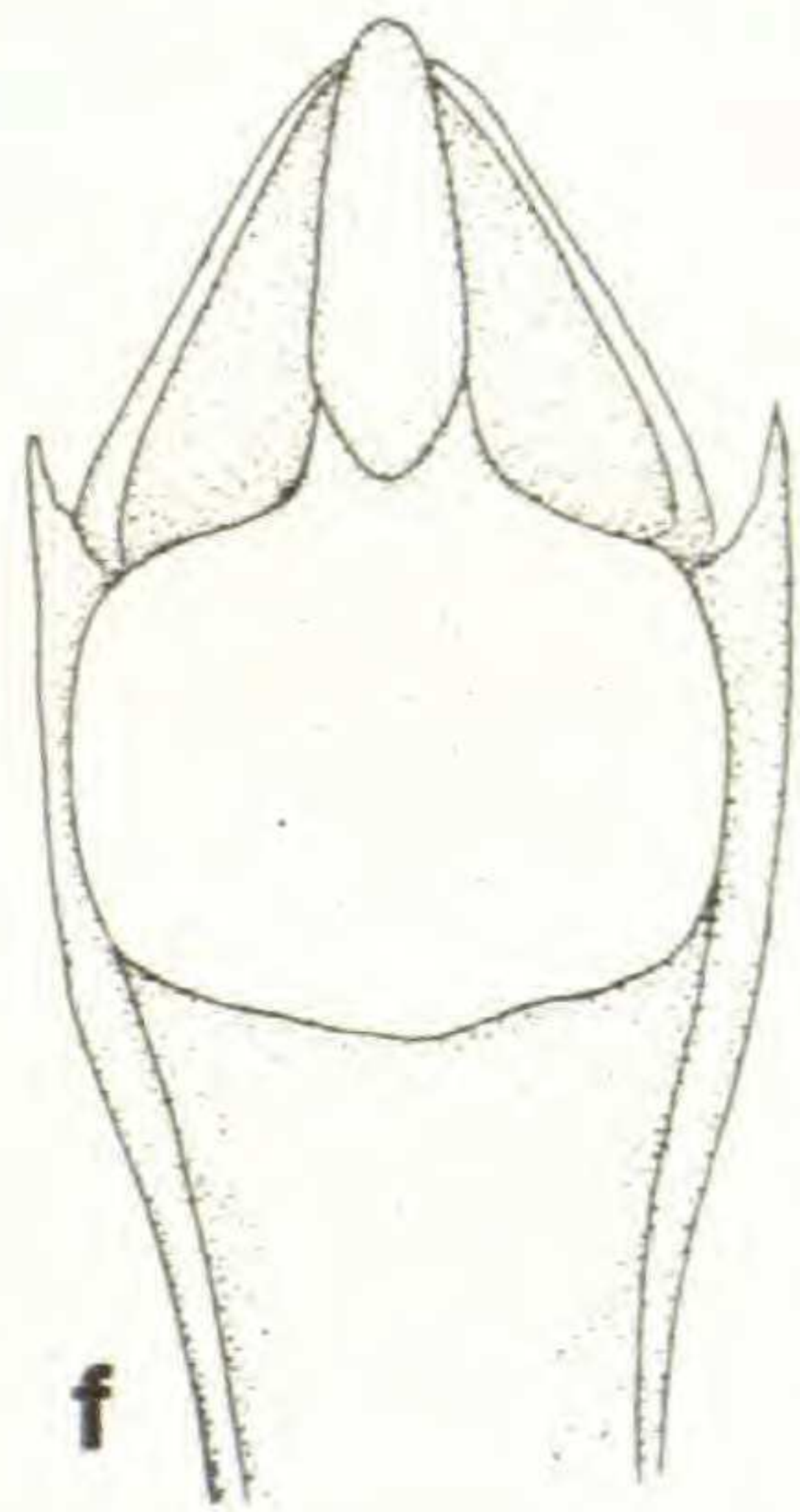
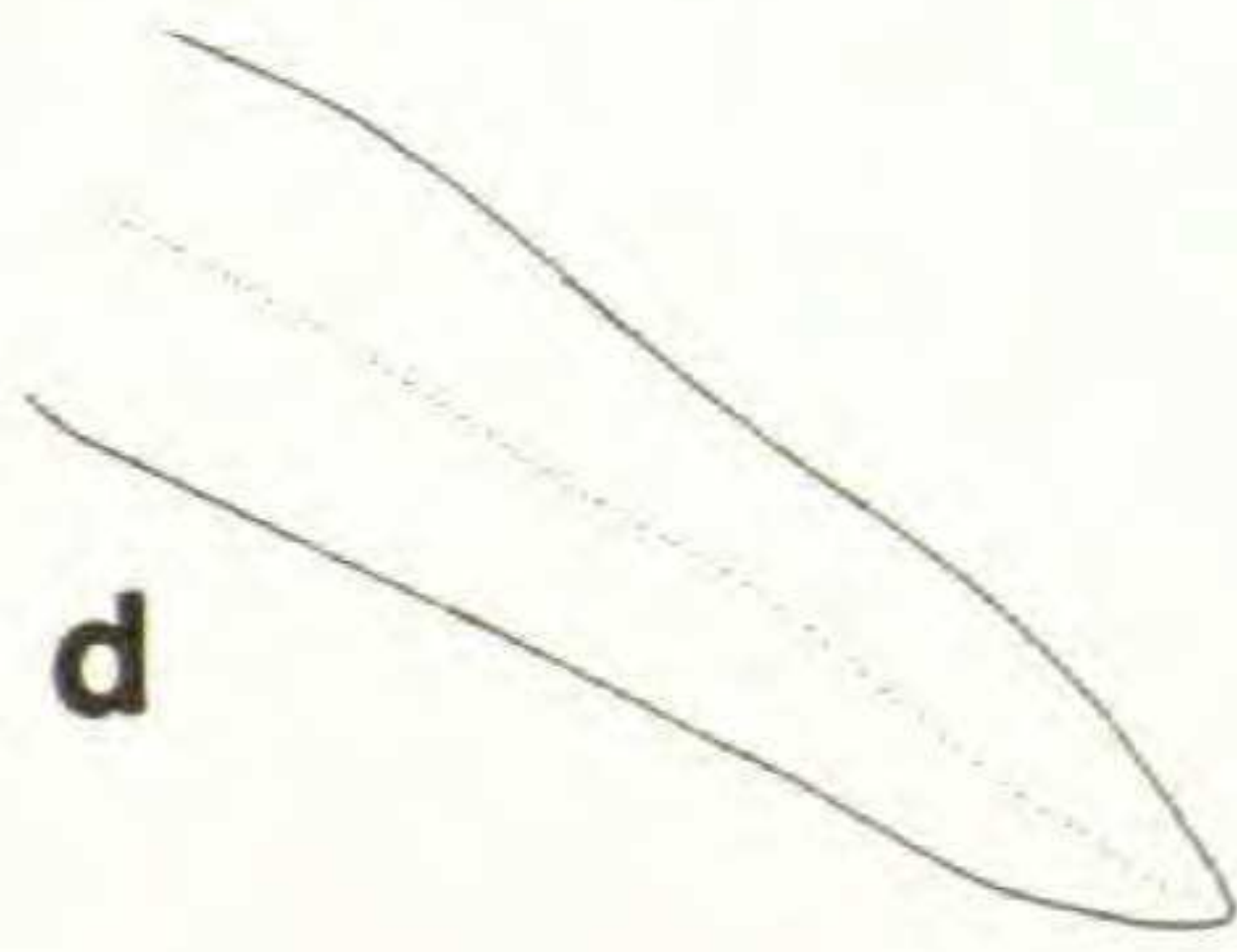
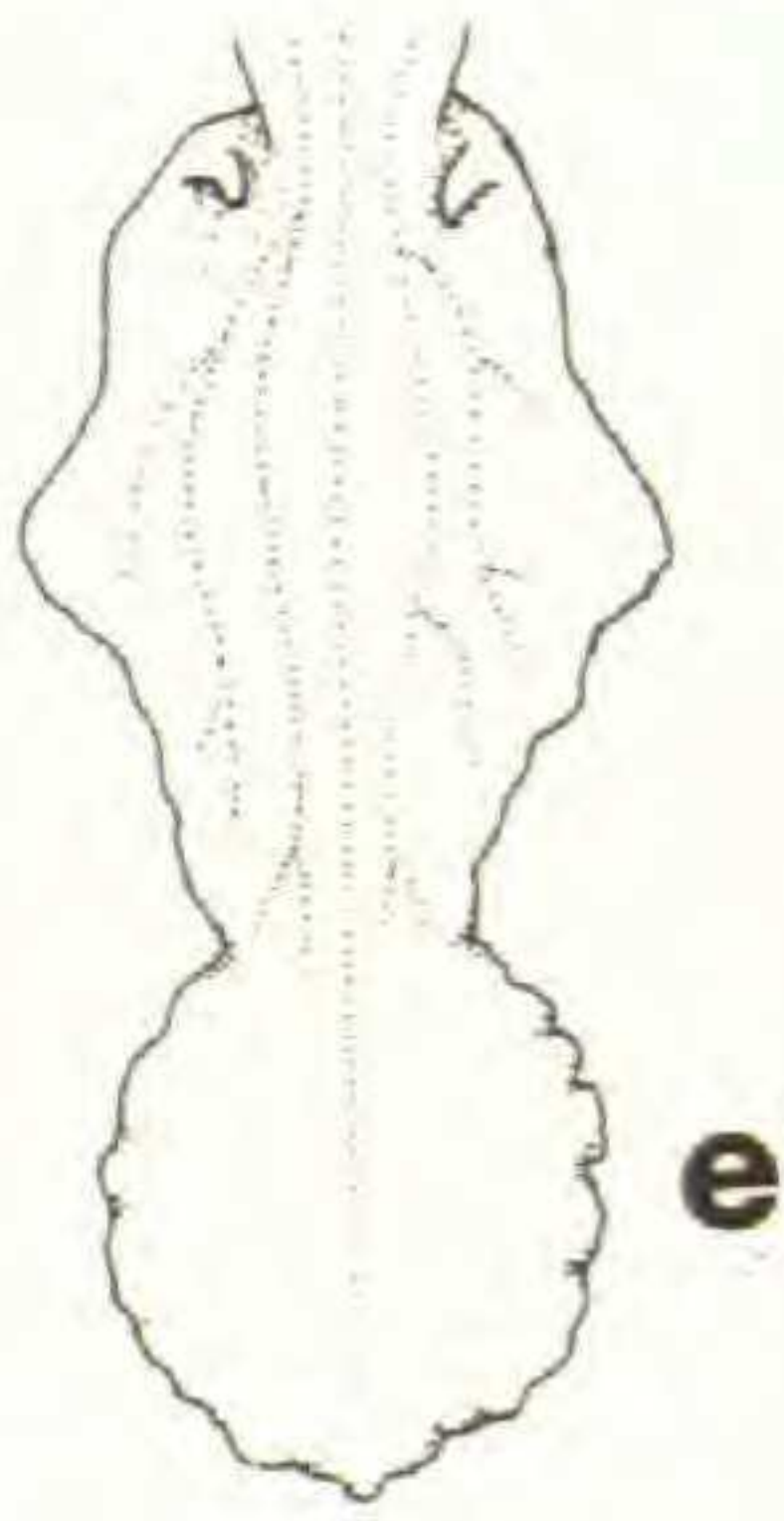
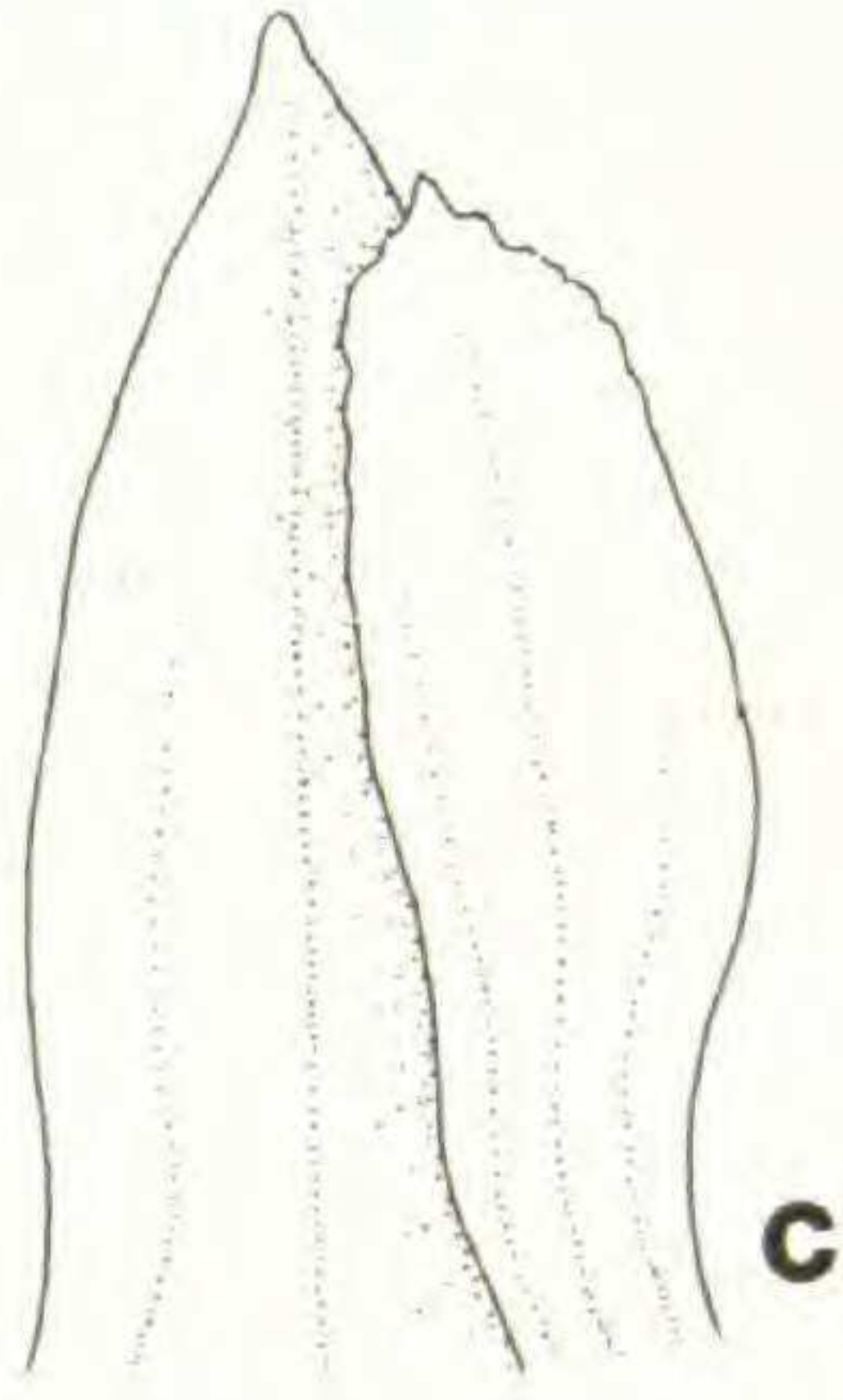
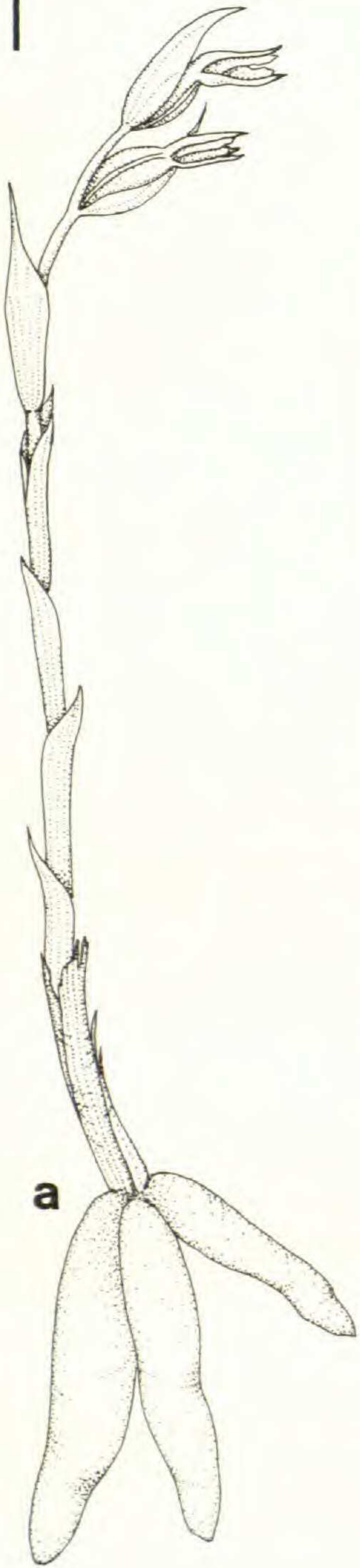
Radices 3-4, tuberoso-incrassatae, 1.8-2.5 cm longae, 0.4-0.5 cm diametro, lanulosae. Caulis 6.5-8.0 cm altus, rectus, laevis, supra vaginam supremam glandulosus. Vaginae internodiis longiores, acutae, herbaceae, nervis parallelis paucis notatae. Folia tempore florendi fugacia. Inflorescentia 1.5-2.0 cm longa, 3-4 flora, laxa. Flores minuti, tubuliformes. Tepala ovario longiora. Labellum angustum, oblongum. Hypochilium 3 mm longum, 2.1 mm latum, basi duobus processibus carnosus ad apicem spectantibus instructum. Lobi laterales hypochilii triangulares. Isthmus (constrictio inter hypochilium et epichilium) gradatim angustatus.

¹ Contribution #634 of the New York State Science Service.

Table 1. Characteristics of *Schiedeella schlechteriana* and similar species.

Character	Expression			
	<i>S. schlechteriana</i>	<i>S. dendroneura</i>	<i>S. parasitica</i>	<i>S. valerioi</i>
Height (cm)	6.5–8.0	10.0–20.0	11.0–40.0	14.0–43.0
Root number	3–4	1	1–4	1(–3)
Flower number	2–3	(3–)4–8(–9)	(2–)4–10(–20)	3–6
Length (mm) of:				
Inflorescence	15–20	25–50	30–100	(30–)60–100(–130)
Floral Bract	10	5–7	5–16	7–22
Ovary	5	5–6	(3–)4–7(–9)	4–11
Dorsal Sepal	5.2	5.0	4.5–7.1	4.3–7.2
Lateral Sepal	6.0	4.1	4.5–7.0	5.0–6.4
Petal	5.0	4.6	4.0–6.1	4.0–6.1
Hypochile	3.0	2.9	3.2–5.7	3.5–4.5
Epichile	2.0	1.6	1.4–3.0	1.0–1.7
Gynostemium	2.0	2.0	3.5–5.0	4.0–5.0
Width (mm) of:				
Dorsal Sepal	1.3	1.8	1.2–2.5	1.1–2.0
Lateral Sepal	1.5	1.1	1.0–2.0	1.0–1.6
Petal	1.2	1.1	0.7–1.2	0.8–1.5
Hypochile	2.1	3.0	1.9–4.0	1.6–2.1
Epichile	2.0	2.1	2.0–3.0	1.0–1.9
Lip division into hypo- & epichile	distinct	indistinct	distinct	indistinct
Auricles	antrorse	indistinct	cushion-like	indistinct
Red Callus	absent	absent	distinct	absent
Lip Venation	dendritic	dendritic	unbranched	unbranched
Glands on . . .	axis & sparsely on ovary	eglandular	axis, ovary, & bases of sepals	axis, sparsely sepals & ovary

Figure 1. *Schiedeella schlechteriana*. Drawings from the Holotype (*Smith 559*: F). **a**: Plant; scale equals 1 cm. **b**: Flower and floral bract, lateral view; scale equals 1 mm. **c**: Dorsal sepal and petal, showing natural association; scale equals 1 mm. **d**: Lateral sepal; scale as in c. **e**: Lip, scale as in c. **f**: Gynostemium, ventral view, scale equals 1 mm. **g**: Rostellum remnant; scale as in f.



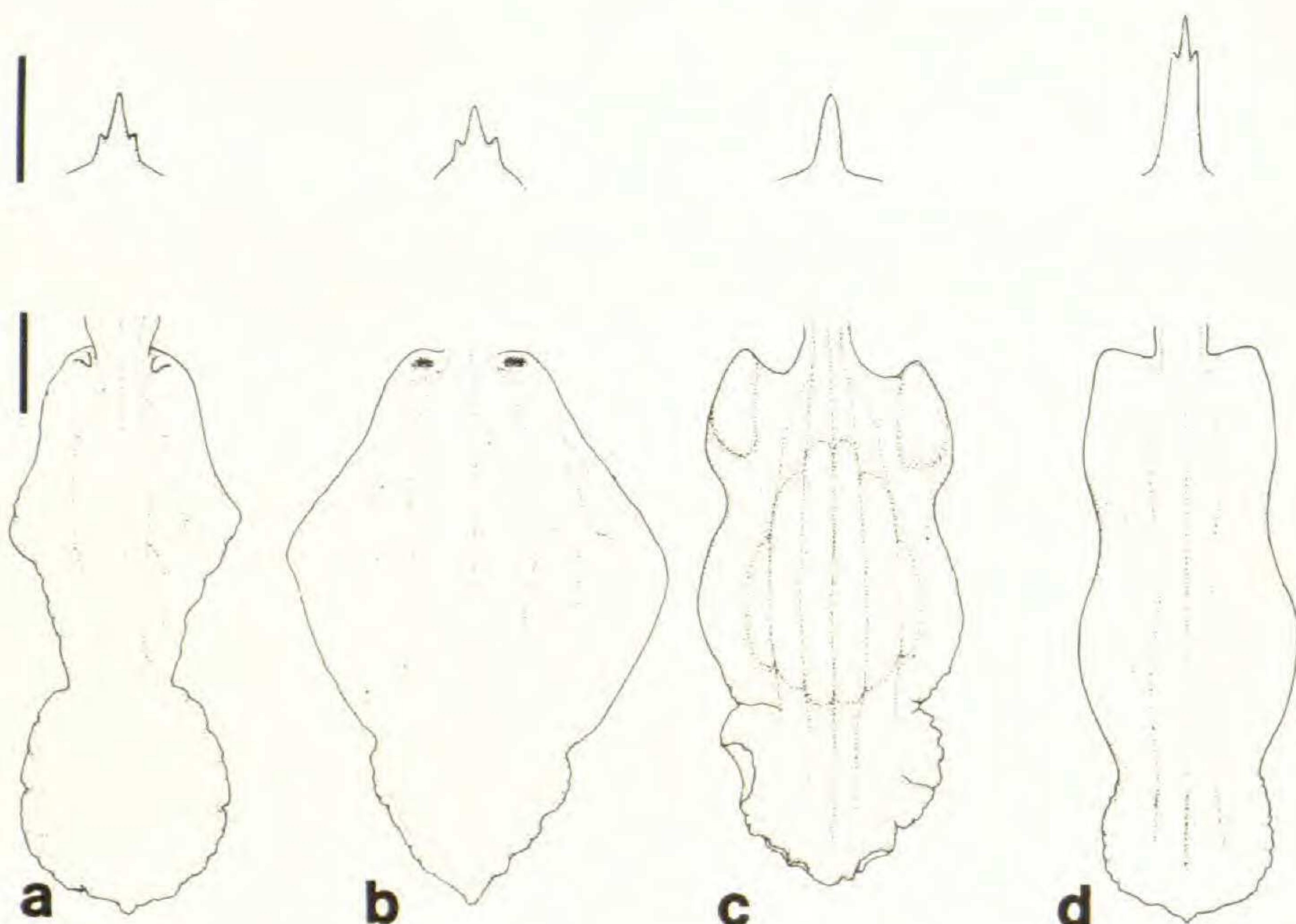


Figure 2. Rostellum remnants (above) and lips (below) of the four *Schiedeella* species discussed in the text. Scales equal 1 mm. **a**: *S. schlechteriana* Szlachetko & Sheviak. *Smith 559* (F) (HOLOTYPE). **b**: *S. dendroneura* (Sheviak & Bye) Burns-Balogh. *Bye 3944* (NYS) (HOLOTYPE). **c**: *S. parasitica* (Rich. & Gal.) Schltr. *Hagsater 6004* (AMO). **d**: *S. valerioi* (Ames & Schweinf.) Szlachetko & Sheviak. *Skutch 283* (US).

Epichilium 2 mm × 2 mm, plus minusve ovale, obtusum. Labelli incrassatio rubra absens, nervi dendroidei. Tepala cetera acuta, extus laevia. Gynostemium generi characteristicum. Rostellum viscidio ablato subulatum, latere utroque denticulo parvo instructum. Ovarium laxe glandulosum. Bracteae ovario circa duplo longiores herbaceae, 3 nervis ramificatis instructae.

Plants tiny. Roots 3–4, 1.8–2.5 cm long, 0.4–0.5 cm in diameter, tuberously thickened, lanulose. Stem 6.5–8.0 cm tall, erect, glabrous below, glandular above the uppermost bracts. Cauline bracts longer than the internodes (the uppermost reaching the inflorescence), sharply pointed, herbaceous, with parallel veins. Leaves basal, fugaceous, otherwise unknown. Inflorescence 1.5–2.0 cm long, laxly 2- or 3-flowered, the axis glandular. Flowers small, tubular. Perianth segments longer than ovary. Lip lacking a red callus, rather narrow, oblong, with distinctly dendritic proliferation of nerves. Hypochile 3 mm long, 2.1 mm wide, at the base the upper surface glandular with two fleshy, very small auricles bent toward the apex of the lip. Hypochile gradually tapered to

epichile, more or less rhombic, the side lobes triangular. Epichile 2×2 mm, oval, obtuse, the margin very minutely but distinctly erose. Dorsal sepal 6 mm long, 1.5 mm wide, lanceolate, indistinctly 3-nerved, glabrous. Lateral sepals 5.2 mm long, 1.3 mm wide, narrowly triangular, 1-nerved, glabrous. Petals 5 mm long, 1.2 mm wide, indistinctly falcate-banded, very thin, relatively broad, the apical margin erose, 3-nerved. Gynostemium very short. Rostellum remnant distinctly 3-dentate, the central tooth longer than the laterals. Viscidium nearly sheath-like. Ovary up to 5 mm long, sparsely glandular. Floral bracts 10 mm long, about twice as long as the ovary, thin, herbaceous, semi-translucent, acuminate, with 3 branched nerves.

TYPUS: GUATEMALA: Totonicapán: Totonicapán, Empuxet: En pastizal sobrepastoreado (*Agrostis exserta*–*Geranium alpicola*); exposición suroeste; pendiente moderado; plena sol. Perenne; flores blancas, el labio con marcaciones oxidas. Localmente común. 3200 m. 2 abr 1977. *D. N. Smith 559* (HOLOTYPE: F 1858096).

Known only from the type collection.

ETYMOLOGY: Named in honor of Rudolf Schlechter, who pioneered the revision of the Spiranthinae.

Schiedeella schlechteriana differs from any previously described species in the shape of the lip, apically-directed fleshy basal auricles on the lip, and by its diminutive nature, with very short, few-flowered inflorescences. It is most similar to three other species: *S. parasitica* (Rich. & Gal.) Schltr., *S. dendroneura* (Sheviak & Bye) Burns-Balogh, and *S. valerioi* (Ames & Schweinf.) Szlachetko & Sheviak. From *S. parasitica* it differs in the absence of a red callus on the lip, the venation of the lip, and the length of the gynostemium. From *S. valerioi* it differs in the type of venation, the distinct isthmus dividing the lip into evident epi- and hypochile, and in the length of the gynostemium. From *S. dendroneura* it differs in the presence of a distinct isthmus, glandular ovary and axis, and number of tuberous roots. These and other characteristics of the four species are compared in detail in Table 1 and illustrated in Figure 2.

During the course of this study it became apparent that *Schiedeella valerioi* should be maintained as distinct at the specific level, but that it had not in record been transferred to *Schiedeella* from *Spiranthes*. We do so here:

Schiedeella valerioi (Ames & Schweinf.) Szlachetko & Sheviak,
comb. nov.

BASIONYM: *Spiranthes valerioi* Ames & Schweinf., Schedulae Orchidianaes 10:8.
1930.

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